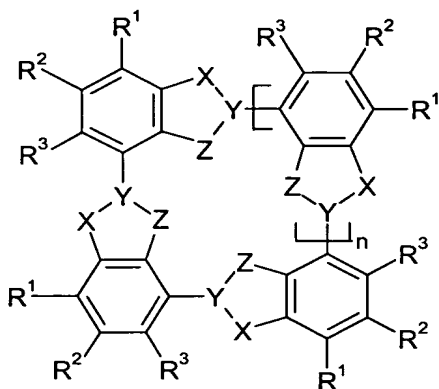


# IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): The use of A composition comprising:

a cyclic compounds of compound represented by the formula (I) and at least one tautomeric structure thereof



where

or at least one metal complex of the cyclic compound

or at least one complex of the cyclic compound with mineral acids, chloride, sulfate, bisulfate, phosphate, hydrogen phosphate, nitrate,  $\text{BF}_4^-$  or methanesulfonate being present as opposite ions  $\text{X}^-$  in the case of cationic cyclic structures,

wherein

n is a number in the range from 1 to 7,

X-Y-Z, in each case independently of one another, is O-C=N, N=C-O,  $\text{NR}^5\text{-C=N}$ ,  $\text{N=C-NR}^5$ ,  $\text{N}^+\text{R}^5_2\text{-C=N}$ ,  $\text{N=C-N}^+\text{R}^5_2$ ,  $\text{O-C=N}^+\text{R}^5$ ,  $\text{N}^+\text{R}^5\text{=C-O}$ ,  $\text{S-C=N}^+\text{R}^5$ ,  $\text{N}^+\text{R}^5\text{=C-S}$ ,  $\text{S-C=N}$ , or  $\text{N=C-S}$ ,

$\text{R}^1$ ,  $\text{R}^2$  and  $\text{R}^3$ , in each case independently of one another, are H or a substituent selected from the group consisting of substituted or unsubstituted  $\text{C}_{1-12}$ -alkyl, substituted or unsubstituted  $\text{C}_{1-12}$ -alkanoyl, substituted or unsubstituted  $\text{C}_{3-7}$ -cycloalkyl, substituted or unsubstituted  $\text{C}_{6-12}$ -aryl, substituted or unsubstituted  $\text{C}_{7-13}$ -aralkyl, substituted or

unsubstituted C<sub>7-13</sub>-alkaryl, substituted or unsubstituted C<sub>1-12</sub>-alkoxy, substituted or unsubstituted C<sub>6-12</sub>-aryloxy, substituted or unsubstituted C<sub>1-12</sub>-hydroxyalkyl, ~~[[a]]~~ substituted or unsubstituted heterocycle, substituted or unsubstituted C<sub>6-12</sub>-aroyl, ~~each of which may be substituted~~, hydroxyl, thiol, halogen, cyano, isocyano, nitro, ammonium, amino, phosphine, phosphine oxide, a sulfonic acid, ~~acid or a derivative of said sulfonic acid, thereof~~, carboxylic acid, ~~acid or a derivative of said carboxylic acid, thereof~~, a derivative of silicon, C<sub>2-12</sub>-alkynyl or C<sub>2-12</sub>-alkenyl, ~~it being possible for~~ C<sub>2-12</sub>-alkynyl, C<sub>2-12</sub>-alkenyl, wherein the double or triple bonds of the C<sub>2-12</sub>-alkynyl and C<sub>2-12</sub>-alkenyl ~~to be~~ are optionally linked directly to the cycloquater skeleton or ~~to be~~ are optionally in the chain, a carbamate of the formula -NH-CO-OR<sup>7</sup>, a substituted urea of the formula -NR<sup>7</sup>-CO-NR<sup>7</sup><sub>2</sub>, an alkyl carbonate substituent of the formula -O-CO-OR<sup>7</sup>, a sulfinic acid of the formula -SO-OR<sup>7</sup>, ~~-SO-OR<sup>7</sup> or a derivative of said sulfinic acid, thereof~~, a sulfoxide of the formula -SO-R<sup>7</sup>, ~~-SO-R<sup>7</sup> or a derivative of said sulfoxide, thereof~~, a phosphonic acid ~~acid or a salt of said phosphonic acid, an ester of said phosphonic acid, and or an amide of said phosphonic acid; thereof~~,

~~it also being possible for~~ R<sup>1</sup> and R<sup>2</sup> and/or R<sup>2</sup> and R<sup>3</sup>, in each case independently of one another, ~~to~~ also optionally form unsubstituted or substituted fused ring systems comprising from 1 to 3 rings, which ~~may contain~~ optionally comprise hetero atom groups, or ~~[[to]]~~ optionally form unsubstituted or substituted alkylene groups which ~~may be~~ are optionally interrupted by hetero atom groups, ~~it also being possible for~~ wherein the fused compounds ~~to be~~ ring systems are optionally substituted; ~~substituted as stated above for the radicals R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>,~~

~~it being possible for~~ wherein the oxygen atoms in R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> are optionally radicals ~~carrying oxygen atoms also to be~~ replaced by sulfur atoms,

~~it being possible for~~ optionally, on average from 0.05 to 100% of ~~the radicals~~ R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> present in the molecule ~~to differ from~~ are not hydrogen,

or corresponding heterocyclic compounds ~~in which~~ wherein at least one group  $-CR^1=$ ,  $-CR^2=$ , and  $-CR^3=$   ~~$-CR^3-CR^3=$~~  is replaced by  $-N=$ ,

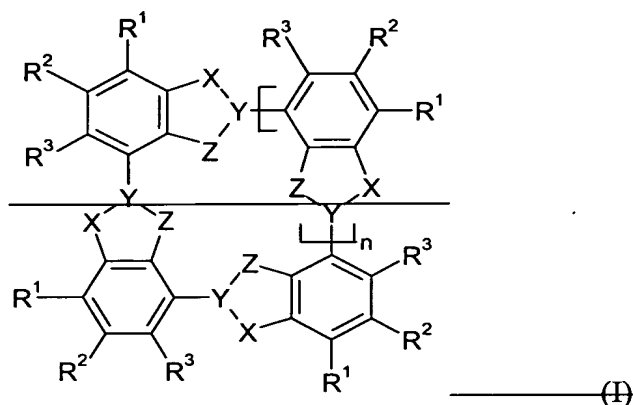
$R^5$ , in each case independently of one another, are H, unsubstituted or substituted  $C_{1-12}$ -alkyl,  $C_{6-12}$ -aryl,  $C_{7-13}$ -alkylaryl, unsubstituted or substituted  $C_{1-12}$ -alkanoyl, unsubstituted or substituted  $C_{7-13}$ -aryloyl, oligoethylene glycol having 1 to 6 oxygen atoms, oligoethylene glycol ether having 1 to 6 oxygen atoms, imidazolymethyl or a corresponding radical ~~in which~~ wherein a nitrogen atom is substituted by a  $C_{1-12}$ -alkyl radical and ~~may~~ optionally carry a positive charge and a C-H group in the ring ~~may be~~ are optionally replaced by C-( $C_{1-12}$ -alkyl), or (1- $C_{4-6}$ -lactam)methyl, which ~~may be~~ are optionally  $C_{1-12}$ -alkyl-substituted on the ring,

$R^7$ , in each case independently of one another, are H,  $C_{1-12}$ -alkyl or  $C_{6-12}$ -aryl,  $C_{6-12}$ -aryl,

~~and tautomeric structures thereof~~

~~or metal complexes of the cyclic compounds or complexes of the cyclic compounds with mineral acids, chloride, sulfate, bisulfate, phosphate, hydrogen phosphate, nitrate,  $BF_4^-$  or methanesulfonate being present as opposite ions  $X^-$  in the case of cationic cyclic structures, as light absorbers, materials for hole injection layers in OLEDs, light-emitting compounds in OLED and synergistic agents for the dispersing of pigments or for optical data storage.~~

Claim 2 (Currently Amended): The ~~use~~ composition as claimed in claim 1, wherein [[a]] the composition comprises the cyclic compound of the formula (I) or at least one metal complex of the cyclic compound,



where

$n$  is an integer in the range from 1 to 7,

wherein

X-Y-Z, in each case independently of one another, is O-C=N, N=C-O, NH-C=N, N=C-NH, S-C=N or N=C-S,

$R^1$ ,  $R^2$  and  $R^3$ , in each case independently of one another, are H or a substituent selected from the group consisting of substituted or unsubstituted  $C_{1-12}$ -alkyl, substituted or unsubstituted  $C_{1-12}$ -alkanoyl, substituted or unsubstituted  $C_{3-7}$ -cycloalkyl, substituted or unsubstituted  $C_{6-12}$ -aryl, substituted or unsubstituted  $C_{7-13}$ -aralkyl, substituted or unsubstituted  $C_{7-13}$ -alkaryl, substituted or unsubstituted  $C_{1-12}$ -alkoxy, substituted or unsubstituted  $C_{6-12}$ -aryloxy, substituted or unsubstituted  $C_{1-12}$ -hydroxyalkyl, substituted or unsubstituted heterocycle, substituted or unsubstituted  $C_{6-12}$ -aroyl, ~~each of which may be substituted~~, hydroxyl, thiol, halogen, cyano, isocyano, nitro, ammonium, amino, phosphine, phosphine oxide, a sulfonic acid, ~~acid or a derivative of said sulfonic acid~~, thereof, a carboxylic acid, ~~acid or a derivative of said carboxylic acid~~, and thereof or a derivative of silicon,

~~it also being possible for~~  $R^1$  and  $R^2$  and/or  $R^2$  and  $R^3$ , in each case independently of one another, ~~[[to]]~~ also optionally form unsubstituted or substituted fused ring systems comprising from 1 to 3 rings, which ~~may contain~~ optionally comprise hetero atom groups, or

[[to]] optionally form unsubstituted or substituted alkylene groups which ~~may be~~ are  
optionally interrupted by hetero atom groups,

it being possible optionally on average for from 0.01 to 12 of the radicals  $R^1$ ,  $R^2$  and  
 $R^3$  present in the molecule ~~to differ from~~ are not hydrogen,

or corresponding heterocyclic compounds wherein ~~in which~~ at least one group  $-CR^1=$ ,  
 $-CR^2=$  or  $-CR^3=$   $-CR^3=$  is replaced by  $-N=$ ,  $-N=$ ,

~~or metal complexes of the cyclic compounds,~~

~~as light absorbers, materials for hole injection layers in organic light emitting diodes~~  
(OLED)

~~or as synergistic agents for the dispersing of pigments,~~

~~is used.~~

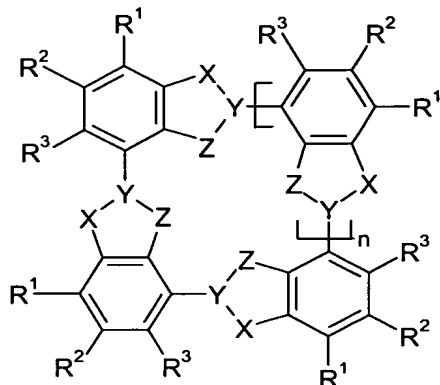
Claim 3 (Canceled).

Claim 4 (Currently Amended): The use composition as claimed in claim 1, ~~any of~~  
~~claims 1 to 3~~, wherein the cyclic compound of the formula (I) is used comprised in the  
composition in soluble, partly soluble or insoluble form in an application medium,

~~it also being possible for~~ wherein the insoluble form optionally comprises solid  
solutions with other colorants. ~~colorants to be present in the insoluble form.~~

Claim 5 (Currently Amended): The use composition as claimed in claim 1, ~~any of~~  
~~claims 1 to 4~~, wherein all  $R^1$  are the same, all  $R^2$  are the same, and all  $R^3$  are the same. ~~have~~  
~~the same meanings for all positions.~~

Claim 6 (Currently Amended): A cyclic compound represented by formula (I) or a metal complex of the cyclic compounds or a complex of the cyclic compounds with a mineral acid,



wherein

n is a number in the range from 1 to 7,

X-Y-Z, in each case independently of one another, is O-C=N, NR<sup>5</sup>-C=N, N=C-NR<sup>5</sup>, N<sup>+</sup>R<sup>5</sup>-C=N, N=C-N<sup>+</sup>R<sup>5</sup>, O-C=N<sup>+</sup>R<sup>5</sup>, N<sup>+</sup>R<sup>5</sup>=C-O, S-C=N<sup>+</sup>R<sup>5</sup>, N<sup>+</sup>R<sup>5</sup>=C-S, S-C=N, or N=C-S,

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>, in each case independently of one another, are H or a substituent selected from the group consisting of substituted or unsubstituted C<sub>1-12</sub>-alkyl, substituted or unsubstituted C<sub>1-12</sub>-alkanoyl, substituted or unsubstituted C<sub>3-7</sub>-cycloalkyl, substituted or unsubstituted C<sub>6-12</sub>-aryl, substituted or unsubstituted C<sub>7-13</sub>-aralkyl, substituted or unsubstituted C<sub>7-13</sub>-alkaryl, substituted or unsubstituted C<sub>1-12</sub>-alkoxy, substituted or unsubstituted C<sub>6-12</sub>-aryloxy, substituted or unsubstituted C<sub>1-12</sub>-hydroxyalkyl, substituted or unsubstituted heterocycle, substituted or unsubstituted C<sub>6-12</sub>-aroyl, hydroxyl, thiol, halogen, cyano, isocyano, nitro, ammonium, amino, phosphine, phosphine oxide, a sulfonic acid, a derivative of said sulfonic acid, carboxylic acid, a derivative of said carboxylic acid, a derivative of silicon, C<sub>2-12</sub>-alkynyl, C<sub>2-12</sub>-alkenyl, wherein the double or triple bonds of the C<sub>2-12</sub>-alkynyl and C<sub>2-12</sub>-alkenyl are optionally linked directly to the cycloquater skeleton or are optionally in the chain, a carbamate of the formula -NH-CO-OR<sup>7</sup>, a substituted urea of the

formula -NR<sup>7</sup>-CO-NR<sup>7</sup><sub>2</sub>, an alkyl carbonate substituent of the formula -O-CO-OR<sup>7</sup>, a sulfinic acid of the formula -SO-OR<sup>7</sup>, a derivative of said sulfinic acid, a sulfoxide of the formula -SO-R<sup>7</sup>, a derivative of said sulfoxide, a phosphonic acid, a salt of said phosphonic acid, an ester of said phosphonic acid, and an amide of said phosphonic acid;

R<sup>1</sup> and R<sup>2</sup> and/or R<sup>2</sup> and R<sup>3</sup>, in each case independently of one another, also optionally form unsubstituted or substituted fused ring systems comprising from 1 to 3 rings, which optionally comprise hetero atom groups, or optionally form unsubstituted or substituted alkylene groups which are optionally interrupted by hetero atom groups, wherein the fused ring systems are optionally substituted;

wherein the oxygen atoms in R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> are optionally replaced by sulfur atoms, optionally, on average from 0.05 to 100% of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> present in the molecule are not hydrogen,

or corresponding heterocyclic compounds wherein at least one group -CR<sup>1</sup>=, -CR<sup>2</sup>=, and -CR<sup>3</sup>= is replaced by -N=,

R<sup>5</sup>, in each case independently of one another, are H, unsubstituted or substituted C<sub>1-12</sub>-alkyl, C<sub>6-12</sub>-aryl, C<sub>7-13</sub>-alkylaryl, unsubstituted or substituted C<sub>1-12</sub>-alkanoyl, unsubstituted or substituted C<sub>7-13</sub>-aryloyl, oligoethylene glycol having 1 to 6 oxygen atoms, oligoethylene glycol ether having 1 to 6 oxygen atoms, imidazolymethyl or a corresponding radical wherein a nitrogen atom is substituted by a C<sub>1-12</sub>-alkyl radical and optionally carry a positive charge and a C-H group in the ring are optionally replaced by C-(C<sub>1-12</sub>-alkyl), or (1-C<sub>4-6</sub>-lactam)methyl, which are optionally C<sub>1-12</sub>-alkyl-substituted on the ring,

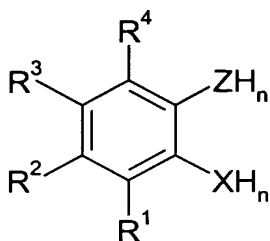
R<sup>7</sup>, in each case independently of one another, are H, C<sub>1-12</sub>-alkyl or C<sub>6-12</sub>-aryl, as defined in claim 1 or 2,

with the exception of cyclic compounds where

X-Y-Z is N=C-O, NH-C=N or N=C-NH,

$R^1$ ,  $R^2$  and  $R^3$  are H or  $C_{1-6}$ -alkyl.

Claim 7 (Currently Amended): A process for the preparation of a cyclic compound of the formula (I) as claimed in claim 6 ~~by 6~~, the process comprising:  
performing a cyclization of a compound of the formula (II)



(II)

optionally in the presence of metal salts, metal powders or Lewis acids as templates  
and condensing agents or

under dehydrating conditions,

wherein

where

$R^1$ ,  $R^2$ ,  $R^3$ , X and Z — are as stated,

$R^4$  is  $-COOH$  or a derivative thereof and

n in each case is 1 or 2, to obtain the stoichiometry,

it also being possible for wherein OH groups to be are optionally present as alkali metal salt or ammonium salt groups and/or for  $NH_2$  groups to be are optionally present in protonated form or derivative form as  $-NO$ ,  $-NO_2$ ,  $-N=N$ -aryl,  $=NOH$ , or  $=NH$ ,  $=NH$ ,

~~and it being possible for the cyclization to be carried out in the presence of metal salts, metal powders or Lewis acids as templates and in the presence of condensing agents or under dehydrating conditions.~~



Claim 8 (Currently Amended): A process for the preparation of a complex of a cyclic compound, the process comprising: by the preparation of

preparing the cyclic compound by [[a]] the process as claimed in claim 7 [[8]] in the presence of metal salts or metal powders as templates. templates or by reaction of a cyclic compound as claimed in claim 7 with a metal salt or metal powder.

Claim 9 (Currently Amended): ~~The use as claimed in any of claims 1 to 5 as a light absorber for~~

A method of coloring high molecular weight an organic materials material, the process comprising:

applying the composition as claimed in claim 1 to the organic material.

Claim 10 (Currently Amended): A thermoplastic molding material, finish or coating composition comprising the composition as claimed in claim 1. a light absorber as defined in any of claims 1 to 5.

Claim 11 (New): The composition as claimed in claim 1, wherein the composition is  
a light absorber,  
a material for hole injection layers in OLEDs,  
a light-emitting compound in OLED,  
a synergistic agent for dispersing pigments or  
a synergistic agent for optical data storage.

Claim 12 (New): The composition as claimed in claim 2, wherein the composition is  
a light absorber,

a material for hole injection layers in organic light-emitting diodes (OLED) or  
a synergistic agent for dispersing pigments,

Claim 13 (New): The composition as claimed in claim 11, wherein the light absorber  
is a UV absorber and/or a visible-light absorber.

Claim 14 (New): A process for the preparation of a complex of a cyclic compound,  
the process comprising:  
reacting the cyclic compound as claimed in claim 6 with a metal salt or metal powder.